Identity Changes and Well-being Gains of Spending Money on Material and Experiential Consumer Products

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Highlights

- How a purchase is thought to transform one's sense of self by satisfying the different identity-related functions of *distinctiveness*, *effectiveness, self-esteem*, *relatedness*, and *projected identity* explains variance in expected and perceived well-being gains associated with consumer products above and beyond the material-experiential nature of a purchase.
- The identity-related functions of *effectiveness* and *self-esteem* were consistently found to positively predict well-being, indicating that gaining a higher sense of autonomy and control, and moving closer to an ideal self, are sources of hedonic value for consumers.
- The function of *projected identity* (displaying financial and social status to others through consumption) was found to be satisfied by both material and experiential purchases and was linked overall to lower well-being.
- The perceived satisfaction of the identity-related functions of *self-esteem* and *relatedness* increased after a purchase was made, and the identity motives satisfied by consumer products explained more variance overall in well-being judgements from past purchases than future ones.

Abstract

Recent research determined that buying experiences, rather than material items, leads to higher levels of well-being, perhaps because experiences are more connected to the sense of self. However, little is known about which of the identity-related functions (IRFs) that a purchase can serve – such as gaining autonomy and control (*effectiveness*), acquiring individuality (*distinctiveness*), repairing a perceived identity deficit (*self-esteem*), fostering symbolic affiliation to close ones or social groups (*relatedness*), or displaying wealth and higher status to others (*projected identity*) – might be driving the effects on well-being. The present research tests Motivated Identity Construction Theory (MICT) in a consumer setting by systematically analysing how material and experiential spending choices are thought to transform the identity of the buyer and how those changes are linked to expected or perceived well-being before and after purchasing. Two studies, one experimental (n = 329) and one repeated measures (T1 n = 370; T2 n = 183), suggested that experiential purchases are overall better at satisfying the IRFs of *effectiveness, distinctiveness, self-esteem*, and *relatedness*. In fact, *effectiveness* and *self-esteem* were consistently found to predict well-being across samples and time frames, indicating that gaining a higher sense of autonomy and control over one's environment, and moving closer to an ideal self, are sources of hedonic value for consumers. The function of *projected identity* was found to be satisfied by both material and experiential purchases and was linked to lower well-being. The IRFs of *distinctiveness* and *relatedness* presented variations between samples suggesting that the links between identity construction processes and well-being gains in consumption might be individually and socially constructed and, that further research across different social groups and life stages is needed. Finally, the satisfaction of the IRF of *self-esteem* and *relatedness* increased after a purchase was made, and the identity motives satisfied by consumer products explained overall more variance in well-being judgements from past purchases than from future ones

suggesting differences between past and future spending choices in identity and well-being evaluation processes.

Key words: experiential purchases; identity; consumption; well-being; identity motives.

Introduction

The relationship between money and happiness has been an area of great expansion in the field of economic psychology in past decades (Lea & Webley, 2014). A rapidly growing body of research has suggested that how a person uses their money has an impact on their well-being; in particular, that spending money on *experiences*, defined as "events that one lives through", can lead to greater happiness than spending money on *material items*, or "tangible objects that are kept in one's possession" (Van Boven & Gilovich, 2003, p.1194). The finding that experiential purchases (as opposed to material ones) predict higher levels of well-being has been consistently replicated (Caprariello & Reis, 2013; Howell & Hill, 2009; Nicolao, Irwin, & Goodman, 2009; Thomas & Millar, 2013). Further investigations determined that experiential purchases have a higher impact on the consumer's identity than do material purchases (Carter & Gilovich, 2012; Guevarra & Howell, 2015; Kim, Seto, Christy, & Hicks, 2016; Thomas, 2010). However, the research looking at the links between identity and well-being in consumption has been limited to the perceived centrality and influence that a purchase has on the buyer's identity, thus providing little insight into how a spending choice might transform one's sense of self or which specific changes in the identity of the buyer might be associated with a perceived boost to well-being. Therefore, the present research aims to examine how material and experiential consumer products might help to satisfy different identity-related functions and to determine which specific identity changes are linked to well-being gains before and after a purchase is made.

Spending money and well-being

In the past decades, consumer psychologists have approached the individual as an emotional decision maker and several authors have identified affective states as the cause and consequence of consumers engaging in spending behaviours (Bagozzi, Baumgartner, Pieters, & Zeelenberg, 2000; Bagozzi, Gopinath, & Nyer, 1999; Dittmar, 2008; Laros & Steenkamp,

2005; Richins, 1997). Consumers seem to spend their money to achieve happiness and to escape from aversive emotions (Ditmar, 2008; Donnelly, Ksendzova, Howell, Vohs, & Baumeister, 2016). However, there is still little understanding about the sources of pleasure in consumption (Alba & Williams, 2013), and therefore, further research on well-being judgements in relation to consumer products is needed.

A body of research exploring consumers well-being evaluations of their purchases has suggested that experiential spending choices provide higher levels of happiness than material ones due to three main psychological processes: (1) social connection, (2) comparisons and regrets, and (3) identity (Gilovich, Kumar & Jampol, 2015). However, identity has been measured as one unified construct, thus failing to consider the multiplicity of elements that compose one's sense of self (Vignoles et al., 2006). Consequently, the present research aims to extend the current literature by examining the specific identity-related functions that material and experiential consumer products provide, and the role that these identity-related functions play in the consumers' perceptions and expectations of well-being.

Identity and consumption: We are what we buy

From its earliest conceptualizations, the construct of identity in psychology has been thought to contain a wide variety of elements including the physical body, psychological traits, material objects, places, relationships, work and even one's bank account (James, 1892). Some of those identity elements external to the individual, such as material objects, other people or places, have been named the extended sense of self (Belk, 1989). Furthermore, the sense of self and identity construction processes have been repeatedly associated with well-being (Gregg, Sedikides, & Gebauer, 2011; Sedikides, Rudich, Gregg, Kumashiro, & Rusbult, 2004; Taylor & Brown, 1988; Vignoles, 2011; Vignoles et al., 2006). However, no prior research has explored the specific psychological processes of identity construction and their links to well-being in a consumer setting.

The construction of the extended sense of self has been frequently examined as a driver for purchasing by consumer psychologists (e.g. Anderson, 2007; Claxton & Murray, 1994; Dittmar, 1991, 1992, 2011; Dittmar, Long, & Meek, 2004; Shrum et al., 2014). Research suggests that people buy to a) transform their self-concept (or life) through the acquisition and use of a product (Richins, 2011), b) reduce deficiencies in their self-concept through symbolic self-completion (Wicklund & Gollwitzer, 1981), and c) reduce the gap between their actual and ideal selves (Dittmar, 2008). The purchase of material possessions, such as clothes or consumer electronics, and consumer experiences, such as holidays or concerts, has been often linked to the construction of the extended sense of self (e.g., Carter & Gilovich, 2012; Dittmar et al., 2004; Richins, 2011; Shrum et al., 2014; Wicklund & Gollwitzer, 1981). However, the transformation that consumer products might bring to the identity of the buyer and its links with perceived increases in well-being have yet to be examined. Therefore, the present research is designed to look at the specific changes that consumer products (material or experiential) bring to the sense of self and its associations with perceived gains in well-being.

Identity-related functions of consumer products

Extensive qualitative research in consumer psychology has identified the identity-related functions (IRFs) of: 1) *Effectiveness*: helping the consumer to gain a perceived sense of autonomy and independence; 2) *Distinctiveness*: allowing the expression of the self as a unique entity; 3) *Self-esteem*: moving the buyer closer to their ideal self and increasing their perception of self-worth; and 4) *Relatedness*: symbolising an affiliation with close others or sense of belonging to a social group (Anderson, 2007; Dittmar, 1991, 2011; Dittmar, Beattie, & Friese, 1996; Dittmar & Drury, 2000).

The IRFs framework from Dittmar (2011) is aligned with motivated identity construction theory (MICT: Vignoles, 2011), which suggests that individuals are drawn to

certain identity motives, such as feeling competent and capable of influencing their environment (*self-efficacy* motive), distinguishing themselves from others (*distinctiveness* motive), seeing themselves in a positive light (*self-esteem* motive), and feeling included and accepted within their social context (*belonging* motive). MICT postulates that people engage in certain behaviours, which might include spending money on purchases, to construct or maintain certain ways of seeing themselves. MICT predicts that the satisfaction of the identity motives will have positive benefits for well-being. Nevertheless, the framework of MICT has yet to be tested in a consumer setting.

Projected Identity: displaying wealth and higher social status through consumer products

Consumer products can also be bought to create or communicate a desired social identity to others. The practice of spending money as a way of projecting an identity by displaying social status to external observers is commonly known as "conspicuous consumption" (Braun & Wicklund, 1989; Dittmar, 2008; Dittmar & Kapur, 2011; Podoshen & Andrzejewski, 2012; Rochberg-Halton, 1984). Although this function was not originally included in the IRFs framework (see Dittmar 2011, p. 750), it relates to the consumer's construction of identity. However, it is worth noting that the function of *projected identity* is conceptually different from the IRFs previously introduced. The functions of *effectiveness, distinctiveness, self-esteem,* and *relatedness* have been found to provide private meaning to the buyer (Anderson, 2007), suggesting they are self-defining identity motives. In contrast, the primary aim of the identity function of *projected identity* is to construct an identity in the eyes of others, and therefore, it is an identity-enhancement behaviour and its satisfaction might require external validation. This function has not been explored in the context of buying material vs. experiential purchases, despite the extensive literature that has linked material purchases with conspicuous consumption (e.g., Dittmar, 2008; Dittmar & Kapur,

2011; Podoshen & Andrzejewski, 2012). As a result, the present study will also investigate the satisfaction of the function of *projected identity* by material and experiential spending choices and its links to well-being.

Identity and well-being of consumer products over time

Buying is a continuous process in which consumers can increase their psychological sense of well-being before they spend money, by experiencing positive emotions in anticipation of a purchase, enjoying the benefits of its consumption in the present moment, and having some positive emotions while remembering their spending choice (Dunn & Weidman, 2015; Howell & Guevarra, 2013; Richins, 2013). A series of studies on experiential and material purchases found no differences between past and future consumers' well-being judgements of consumer products (Pchelin & Howell, 2014). However, other studies concluded that individual differences in materialistic value orientations, defined as the tendency to believe that wealth and possessions are at the centre of one's life, define success, and provide happiness, lead consumers of material items to experience distinct emotional journeys over time (Richins, 2013). Moreover, when looking at the remembered enjoyment of a novel purchase it seems that the adaptation rates, or to what extent one gets used to a new state of affairs, differs between experiences and material purchases as people experience faster adaptation rates from buying material items, which leads consumers to experience a steeper emotional decline (Nicolao et al., 2009). Therefore, the emotions that a spending behaviour might evoke in the buyer seem to fluctuate in the time continuum due the individual characteristics of the consumer and the type of purchase bought.

Research on identity has described diverse mechanisms of constructing one's sense of self, depending on the temporal focus adopted. People tend to develop a narrative to make sense retrospectively of their past (McAdams, 2011) but, when projecting into the future, we play with various sets of possible positive and negative identities (Oyserman & James, 2011).

As a result, the psychological processes involved in the construction of identity through the purchase of a consumer product might vary depending on whether one is looking back at their past spending choices or forward at their prospective ones. However, possible differences between past and future-oriented identity construction processes that might arise due to the different mechanisms used when reflecting on one's past or future purchases have not been explored. In fact, previous studies investigating the relationship between consumers' spending choices, identity, and well-being have focused only on retrospective evaluations of past purchases (e.g., Carter & Gilovich, 2012; Guevarra & Howell, 2015). As a result, the current research also aims to provide an initial exploration of the role of the temporal focus adopted on the construction of the extended sense of self in consumption and its links to well-being. Therefore, we will measure the IRFs and well-being associated with a spending choice before and after a purchase is made to examine possible differences between the expected satisfaction of identity-related functions of a future purchase and the perceived fulfilled ones when retrospectively evaluating the purchase, and their links to well-being.

The present research

The present research examines changes in the identity of the buyer experienced as a result of a spending behaviour (material or experiential purchase) and its links with perceived or expected well-being gains associated with the consumer product bought by using the framework of identity-related functions of *projected identity*, *distinctiveness*, *effectiveness*, *self-esteem,* and *relatedness* from Dittmar (2011)[1]. Moreover, the current set of studies will also explore possible differences between future- and past-focused identity construction processes and well-being judgements in a consumer environment.

[1]The IRF of *personal history* was excluded from the current set of studies because this IRF was initially found in the context of existing possessions and therefore was conceptually problematic for the exploration of new future purchases. For example, the adaptation of the items to fit a specific new purchase from the general buying tendencies scale (Dittmar, 2011) lacked coherence (e.g. *'This purchase will be linked to my memories'*).

Drawing on the existing findings in the material and experiential literature, which suggest that experiential purchases are more connected to one's identity (e.g., Carter & Gilovich, 2012), we expect that experiential purchases will satisfy better the IRFs of distinctiveness, effectiveness, self-esteem, and relatedness than will material items. Nevertheless, based on the literature on conspicuous consumption, which has focused on material possessions as displays of social and financial status to others (e.g., Dittmar, 2008), we expect that material purchases will better satisfy the IRF of projected identity than will experiential purchases. Furthermore, based on MICT we expect that satisfying the identity-related functions of distinctiveness, effectiveness, self-esteem, and relatedness will be positively associated with well-being, as MICT postulates that the satisfaction of identity motives will have positive benefits on well-being (Vignoles, 2011). However, we expect that satisfying the IRF of projected identity will be negatively associated with well-being because Self-Determination Theory (SDT) suggests that the pursuit of the extrinsic life goals of wealth, image, and fame leads to lower well-being (Deci & Ryan, 2012; Kasser & Ryan, 1996).

Finally, based on the differences between backwards and forwards identity construction mechanisms (McAdams, 2011; Oyserman & James, 2011), we expect stronger effects on past-focus IRFs evaluations than on future ones as buyers would have fully integrated their past purchases within their identity. On the other hand, due to the uncertainty linked to future spending behaviours and the mental juggling between different possible extended sense of selves due to other available spending choices, we expect that the integration of a future purchase in the buyer's self-concept will be milder than a past one. Therefore, we expect that consumers will magnify the perception of the perceived satisfaction of certain identity motives by past purchases because they might use IRFs in the creation of a narrative to make sense of their previous spending choices.

Study 1

The aim of Study 1 was to examine the differences between material and experiential consumer products in the satisfaction of identity-related functions and its links to expected and perceived well-being gains. To explore possible differences between past and future focus on the construction of the extended sense of self in consumption, we asked participants to describe either something they had bought or were planning to buy. Therefore, Study 1 had a 2 (type of purchase, material or experiential) x 2 (time frame, before vs. after buying a purchase) between-subjects experimental design.

Method

Sample

Participants were approached on the local university campus and other areas of a British city. The final sample consisted of 329 participants after people were removed from the original sample ($N = 447$) for not following the study instructions (e.g., reporting living expenses such as bills or daily commuting expenses, describing more than one item, leaving blank the space provided to describe their spending choice, failing to answer the control questions on purchase's date and/or the experiential-material rating that aimed to ensure that they followed the instructions from their assigned condition).[2] Of the final sample, 60% ($n = 196$) identified as female. Ages ranged from 18 to 56 years ($M = 25.90$, $SD = 6.54$ years). Among respondents, 70% ($n = 229$) were British, 17% ($n = 56$) came from another European country and the remaining 13% ($n = 42$) came from one of 25 different countries. Moreover, 45% ($n = 148$) were students while 52% ($n = 171$) reported being currently in full-time employment and 3% ($n = 10$) were unemployed.

[2] As a result of using a paper questionnaire, 26.40% (118 participants) were excluded from the final sample due to missing data on key questions or not following the study instructions. This exclusion ratio is similar to other studies published in the area of consumption and well-being. For example, in Guevarra & Howell (2015) their exclusion ratio was 25.77% in study 2 and 33.69% in study 3, and Caprariello & Reis (2013) excluded 17.69% and 12.2% in their second and third study respectively.

Procedure and ethical issues

Participants were invited to take part in a paper-and-pen short questionnaire in exchange for a chance to win one of three £25 Amazon vouchers. Anyone older than 18 years qualified for the study. Participants who accepted the invitation (N = 447) were randomly allocated to one of the four conditions (forecasting-material; forecasting-experiential; retrospective-material; retrospective-experiential) [3]. After they described a purchase in their assigned condition, participants were asked to provide the cost and date of their purchase, answer two questions regarding their perceptions or expectations of well-being, and fill in the Consumption Emotions Set (Richins, 1997). Then, they were presented with the IRFs measure (adapted to their allocated temporal condition, see Table B on supplementary materials) followed by a control question that asked participants to rate their purchase on a 7-point scale ranging from: 1 = definitely a material possession; 4 = both; 7 = definitely an experience. Finally, all participants were asked some demographic questions. After completing the questionnaire, respondents were debriefed, thanked, and offered a chocolate bar. The study was approved by the Research Ethics Committee of the University at which the study was carried out and was conducted according to BPS/APA ethical guidelines.

Materials

Experimental conditions. Four questionnaires were developed to examine the two temporal foci (future or past spending choices) and two types of purchase (material or experiential). Participants in the forecasting conditions were asked to think about and describe a purchase that they planned to make, preferably in the subsequent month, for more than £50 and less than £1000.[4] Participants in the retrospective condition were asked to think

[3] The questionnaire contained other psychological measures designed to tap into other variables not addressed in the present report. These included the life orientation test-revised (Carver, Scheier, & Segerstrom, 2010), Aspiration Index (Kasser & Ryan, 1993), and Materialistic Value Scale (Richins, 2004) that were taken at the beginning of the questionnaire.

[4]The lower limit of £50 was chosen to avoid everyday purchases and the upper limit of £1000 was chosen to avoid exceptional purchases.

about and describe a purchase that they had recently made, preferably in the previous month, in the same price range. Participants in the material condition were asked to describe a material purchase, defined as "a tangible object that you obtain and keep in your possession"; participants in the experiential condition were asked to describe "an event or a series of events that you personally encounter or live through" (Van Boven & Gilovich, 2003, p. 1194). All participants were instructed to avoid selecting purchases that were basic living expenses such as bills, groceries, or daily commuting expenses.

Measures

Well-being. Two items taken from previous literature (Pchelin & Howell, 2014; Van Boven & Gilovich, 2003) were used to measure perceived and expected gains in well-being (Future: 'How happy will it make you?' and 'How much do you think this purchase will increase your overall life satisfaction?'; Past: 'When you think about your purchase now, how happy does it make you?' and 'How much do you think this purchase has increased your overall life satisfaction?') rated on a 9-point scale ranging from 1 (not at all) to 9 (very much). Cronbach $\alpha = .69$ and $\alpha = .70$ for the past and future focused conditions respectively.

Positive emotions. The Consumption Emotions Set (Richins, 1997) was used to measure well-being associated with a spending choice. The measure was adapted to the different temporal conditions by adjusting the initial instructions (Future: 'Think about how you WILL feel when you make the purchase. Indicate the extent to which you think you will experience each of the following feelings as a result of your future purchase.'; Past: 'Think about how you feel NOW when thinking about the purchase. Indicate the extent to which you think you experience each of the following feelings as a result of your purchase.'). All participants were asked to rate each emotion on a scale ranging from 0 = not at all, to 4 = very much. We averaged the 13 items measuring positive emotions (joyful, calm, peaceful, contented, fulfilled, optimistic, pleased, hopeful, happy, excited, thrilled, enthusiastic, and

encouraged); Cronbach α = .94 and α = .89 for the past and future focused conditions respectively (see Table A in supplementary materials for a detailed account of the factor loadings).

Identity-related functions. The identity functions of *projected identity*, *effectiveness*, *distinctiveness*, *self-esteem*, and *relatedness* were measured using 20 statements on a 6-point Likert-type scale adapted from Dittmar (2011) to fit the specific purchase (e.g. 'This purchase *made* [will make] me feel more independent' or 'The purchase *made* [will make] me feel different from others'; see Table B in supplementary materials for a detailed account of the items). Cronbach's α ranged from .74 to .86.

Demographics. Measures of gender, age, occupation, and nationality were taken at the end of the questionnaire.

Results

Preliminary analyses

Participants in the experiential condition rated their purchase as more experiential (M = 5.92, SD = 1.53) than did participants in the material condition (M = 3.53, SD = 2.14), with a significant mean difference of -2.40, BCa 95% CI [-1.99, -2.80] $t(308) = -11.296$, $p < .001$. Thus, the described purchases were congruent with the purchase type condition assigned. Moreover, we calculated a variable measuring the time distance between the date that the questionnaire was completed and the reported date of the described consumer product. This variable showed different valence for participants assigned to the future-focus than for participants in past-focus time frame confirming a congruency between the time condition assigned and the described purchase.

Furthermore, means, standard deviations, and correlations were calculated for all study variables separately for the future and past time-frame conditions (see Table 1). The dichotomous variable representing the material and experiential condition (coded as 0 =

material; 1 = experiential) positively correlated with well-being and positive emotions in both the future and past focus conditions (ranging from r =.16 to r = .25, p's < .05) suggesting that experiential purchases were associated with higher well-being and positive emotions. Moreover, the IRFs were also positively correlated with the variables of well-being and positive emotions (r's ranging from .16 to .51, p's < .05), except for projected identity (ranging from r = -.12 to r = .11, p's > .05) suggesting that there was a positive association between the perceived level of satisfaction of IRFs and the well-being and positive emotions associated with the purchase.

Model Development

To test the mediating role of the IRF's in the relationship between type of purchase and well-being as well as the possible moderating effect of time (moderated mediation model), a series of multi-group (past vs. future focus) structural equation models were carried out using the open source statistical software R with the package *Lavaan*. We used the maximum likelihood estimation method and requested 2000 bootstrapped 95% confidence intervals due to some observed deviations from normality on several variables used in the model.

The first multi-group model looking at the direct effect of type of purchase on well-being (see Table 2) suggested that the variable of type of purchase condition (dummy coded as 0 = material and 1 = experiential) significantly predicted well-being. This result suggests that participants assigned to the experiential condition rated their purchase higher in well-being than participants in the material condition. The direct model accounted for 7% and 8% of the variance of well-being in the future and past conditions respectively. However, there were no significant differences between future and past models when equality constraints were imposed, $\chi^2(1)$ =.225, p =.635. Similar results were found in the multi-group model

looking at the effect of type of purchase on positive emotions (see Table C in supplementary materials).

To examine whether material and experiential purchases differed in the satisfaction of the IRFs and examine its role at predicting well-being, while considering the possible moderating effect of time, a multi-group (past vs. future focus) SEM model was carried out (see Figure 1 and Table 2). A constrained model was specified capturing the hypothesized relationships between the variables in which all the path coefficients were fixed to be equal between the past and future models. The results from the constrained model, in comparison with the unconstrainted model, indicated that there were no overall significant differences between the past and future mediation models, $\chi^2(11) = 7.88$, $p = .724$. Therefore, no further SEM models were carried to test the moderation of time. The fit indices indicated excellent fit: CFI = 1; RMSEA = .000.

The results from the constrained mediation model indicated that the type of purchase condition significantly predicts the identity functions of distinctiveness, effectiveness, self-esteem, and relatedness, suggesting that participants in the experiential group reported that their described purchase satisfied higher levels of these identity functions. However, the type of purchase condition did not predict the function of projected identity, indicating that neither material nor experiential purchases were found to be better at satisfying this identity function. In addition, all IRFs significantly predicted the outcome variable of well-being associated with a consumer product. Moreover, as predicted, the function of projected identity was found to negatively predict positive emotions while the other IRFs were found to positively predict the outcome variable of well-being. Furthermore, there were two significant indirect effects between the type of purchase variable and the dependent variable of well-being via the IRFs of effectiveness and self-esteem suggesting partial mediation. Finally, the mediation model accounted for 30% and 37% of the variance of well-being in the future and past

conditions respectively suggesting that introducing the IRFs as predictors significantly improved the variance of well-being explained by the direct model containing only the variable of type of purchase as predictor. Equivalent results were found when the multi-group mediation model was tested with positive emotions as the dependent variable (see Table C and Figure A in supplementary materials).

Discussion

The results from Study 1 confirmed that, as expected, experiential purchases provided higher satisfaction of the IRFs of distinctiveness, effectiveness, self-esteem, and relatedness. Moreover, the satisfaction of these IRFs were found to be positively associated to expected and perceived well-being gains. However, the function of projected identity was not found to be better satisfied by material nor experiential purchases, indicating that experiences might also be used by consumers for signalling wealth and higher social status to others. Nevertheless, as expected, the function of projected identity was negatively linked to well-being. Finally, time was not found to moderate the mediation of the IRFs on the relationship between material vs. experiential spending choices and well-being when comparisons were made between past and future mediation models. Nevertheless, the model including the IRFs as predictors explained more variance in well-being in the past condition than in the future one. However, the cross-sectional nature of the temporal comparisons is a limitation as we were unable to look for variations between the expected and perceived satisfaction of IRFs within participants. Consequently, a second study taking before and after consumption measures is needed to explore possible individual changes in the construction of the extended sense of self in consumption and its relationship with well-being over time.

Study 2

Study 2 was designed to replicate the findings of Study 1 with a repeated measures design and a different sample to explore identity construction mechanisms involved in

consumption over time. Measures were administered to each participant before and after a purchase was made, in order to test within-subjects variability. Two further methodological modifications were made in order to evaluate the robustness of the key conclusions from Study 1. First, Study 2 used a free-choice procedure, that is, no specific material or experiential purchase conditions were assigned to avoid possible social desirability biases due to the implicit association of material purchases with materialism and the negative stereotypes of the latter (Van Boven, Campbell & Gilovich, 2010). Second, rather than categorising the participants' purchases as experiential or materialistic, we focused our analysis on the continuous score representing the perceived materiality or experientiality of the purchase. This more naturalistic and nuanced approach was adopted to overcome the limitations of enforcing a dichotomous typology regarding purchases; for example, experiential products, such as videogames or musical instruments, have been found to have similar effects on well-being and provided similar levels of identity expression when compared with experiential purchases such as concert tickets or holidays (Guevarra & Howell, 2015).

Method

Design

Study 2 collected the same measures on IRFs and well-being as in study 1 but using a repeated measures procedure. Therefore, participants completed two online questionnaires, one before and a second one after a selected consumer product was bought, without imposing any allocation to material vs. experiential purchase type and without mentioning upfront a distinction between material or experiential consumer products to avoid social desirability biases. The Time 1 questionnaire asked participants to freely describe a future planned spending choice and answer several future-focus, purchase-related measures as in the future-focus condition of Study 1. At Time 2, if the purchase described at Time 1 had been bought,

participants were presented a questionnaire with the same purchase-related questions as in the Time 1 survey but adapted to fit the past-focus questionnaire (as in the past condition of Study 1).

Sample

Time 1 questionnaire. A final sample of 370 participants recruited on a University campus was used for the analysis. In the sample, 75.8% of participants identified as female and ranged in age from 18 to 57 (M = 21.55, SD = 5.26). Among respondents, 72.3% were British, 14.8% from another European country, 1.3% from North America, 5.3% from Asia, 2.5% from the Middle East and 3.6% from South America. Moreover, 94.1% were students while 4.8% reported to be currently full-time employed.

Time 2 questionnaire. A final sample of 183 participants indicated that they made the purchase described at Time 1, and therefore they were able to complete the full Time 2 questionnaire. In the final sample, 74.6% identified as female, and their ages ranged from 18 to 53 (M = 22.11, SD = 5.43). The nationalities and occupation ratio remained equal across questionnaires.

Attrition analysis. A MANOVA was carried out to compare the scores of participants who took part in the Time 1 questionnaire only against participants who completed both questionnaires, using all the variables involved in the subsequent set of analyses. This revealed non-significant differences between the groups, V = .03, $F(8, 361)$ = 1.36, p = .213. However, an examination of the univariate ANOVAs showed significant differences on the experiential rating variable, $F(1, 368) = 4.19$, p = .041. Participants who completed both questionnaires rated their purchase as more experiential (M = 4.32, SD = 2.60) than participants who only completed the Time 1 questionnaire (M = 3.78, SD = 2.49). Nevertheless, there were no significant differences in their reported levels of well-being,

positive emotions associated with their future purchases, or the IRFs examined (all *p* values > .05).

Procedure and ethical issues

Participants ($N = 400$)[5] were approached on campus or by email and were invited to take part in a two-part online survey in exchange for a chance to win 1 of 2 £50 Amazon Vouchers or to receive course credits (if eligible). Anyone older than 18 years old qualified for the study. The Time 1 questionnaire was accessed by a link to an online survey provided by email or on a flyer. Participants were asked to think about and describe a future purchase that they were planning to make, followed by the purchase-related questions and some demographic questions. Responses were anonymous but were linked by a memorable unique identifier code question that requested participants to provide the last 4 digits of their phone number, following the procedure of similar studies in consumption (Richins, 2013).

Three to four weeks after completing the Time 1 questionnaire, participants received an email with a link to the Time 2 questionnaire. To access the second questionnaire, they had to enter their unique identifier code, which was linked to the dataset containing their initial answer to the purchase description from the first part of the questionnaire. Therefore, the purchase described at Time 1 was retrieved and displayed by the system, followed by a question that required participants to indicate whether 1) they had made the proposed purchase; 2) they had not yet, but were planning to do so in the near future, or 3) they had not bought the item and were not planning to do so anymore in the near future. If the participant selected option 3, they were sent to a debrief page, where they were thanked for their participation in the study, but no further data was collected. If they indicated that they were going to buy the purchase but had not done it yet, they were instructed to save the link and to

[5]A total of 30 respondents were removed from the final sample because they did not provide a description of a purchase, described more than one item, included a present bought for someone else, or described purchases outside the given instructions (e.g. living expenses).

complete the second part of the study after their described purchase had been made. Participants who did not buy their described purchase and complete the Time 2 questionnaire in the 6 weeks that were given were not included in the T2 sample. Only if the participant indicated that they had bought their described purchase in Time 1 were they able to access the Time 2 questionnaire[6]. Study 2, as Study 1, followed the appropriated ethical guidelines.

Measures[7]

The Time 1 questionnaire included the same purchase-related measures in the same order as in the future condition of Study 1. Participants were asked to describe a future purchase and report an estimate of their expected date of making the purchase and its cost, complete the two-item measure of well-being (α = .69), the Consumption Emotions Set (positive emotions α = .92), the IRFs items (α ranged from .77 to .89, see Tables A and B in supplementary materials), a question for rating the material-experiential nature of the purchase on a 7-point scale (ranging from: 1 = definitely a material possession; 4 = both; 7 = definitely an experience), and some demographics. The Time 2 questionnaire included the same measures related to the participant's purchase used in the past condition of Study 1 and were presented in the same order. The Time 2 measures included the two-item measure of well-being (α = .77), the Consumption Emotions Set (positive emotions α = .93), the identity-related items (α ranged from .82 to .91), the experiential rating, and the same control measure on date of purchase used in the first part of Study 2 and Study 1.

Results

[6]A total of 283 participants accessed the second part of the study (attrition rate of 23.51%). However, 100 participants reported at the start of the questionnaire that they had not made the selected purchase at Time 1 and therefore they were unable to complete the full Time 2 questionnaire that included the past-framed purchase - related measures.

[7]As in study 1, other psychological measures were administered not addressed in the present report, including life orientation test-revised (Carver, Scheier, & Segerstrom, 2010), Aspiration Index (Kasser & Ryan, 1993), Materialistic Value Scale (Richins, 2004), and life satisfaction (Diener, Emmons, Larsen & Griffin, 1985).

Preliminary analysis

The experiential rating question was used to assess the distribution of the purchases described. The analysis revealed that 43.24% participants rated their purchase below the midpoint of the scale, 12.16% rated their purchase in the middle as "*both*" material and experiential and, 44.59% people rated their purchase above the midpoint of the scale. The distribution of the purchases remained broadly consistent in the Time 2 questionnaire (39.34% material, 14.21% both and, 43.72% experiential).

Correlations between the variables were carried out for the data collected at Time 1 and at Time 2 (see Table 3). The results from the analyses showed high correlations between T1 and T2 well-being and positive emotions (r = .72 and r = .65 respectively), IRFs (r's > .69), and the rating variable (r = .87), indicating a high level of consistency of the measures over time. Moreover, the experiential rating variable positively correlated with well-being at both T1 and T2 (r's ranging from .31 to .47), suggesting that the higher the buyer's perception of experientiality of their described purchase, the higher the well-being reported. Also, the IRFs were also positively correlated with well-being (r's ranging from .16 to 51) indicating that higher satisfaction of the IRFs was also positively associated with higher levels of well-being.

Data analyses

Time and the perceived satisfaction of the IRFs. To test if there were any changes between the IRFs measures taken at T1 and T2, a series of paired samples t-test were carried out. The results from the analysis revealed significant differences between the IRFs of self-esteem at T1 (M = 3.75; SD = 1.76) and T2 (M = 3.96; SD = 1.69), t(178) = -2.31, p = .022, bootstrapped 95%CI [-.41, -.02], and relatedness at T1 (M = 3.60; SD = 1.62) and T2 (M = 3.87; SD = 1.65), t(178) = -3.32, p = .001, bootstrapped 95%CI [-.43, -.12], indicating that

participants perceived higher levels of satisfaction of the IRFs of self-esteem and relatedness after the purchase was bought.

Mediation Analyses. To test for mediation a series of SEM models were carried out separately for Time 1 and Time 2 measures on the open source statistical software R with the package *Lavaan* using the maximum likelihood estimation method (see Table 4 and Figures 2 and 3). We requested 2000 bootstrapped and calculated 95% confidence intervals due to some observed deviations from normality on several variables used in the models. The SEM models were saturated, thus fit indices could not be computed.

Time 1. The direct effect model (see Table 4) showed a positive association between the perceived level of materiality-experientiality of a purchase and the expected well-being gains, suggesting that consumer products that were rated as more experiential were associated with higher levels of positive emotions. This model accounted for 19% of the variance of well-being. Moreover, to test the mediation by the IRFs as in Study 1, we created a saturated mediation model (see Figure 2). The model showed that the variable measuring the material-experiential perception of a purchase predicted all IRFs except for projected identity, suggesting that purchases perceived as more experiential were also perceived to provide higher satisfaction of the IRFs of distinctiveness, effectiveness, self-esteem, and relatedness. In addition, the IRFs of effectiveness, self-esteem, and relatedness positively predicted the variable of well-being expected from a consumer product, and projected identity negatively predicted the dependent variable. Finally, there was a significant indirect effect from the experiential rating variable to well-being via the IRF of effectiveness and relatedness, suggesting partial mediation. The model with the IRFs as predictors accounted for 39% of the variance of well-being showing a significant improvement from the model with only the variable measuring the material-experiential nature of the purchase. Broadly similar results were found using positive emotions as a dependent variable in the models (see Table D and

Figure B in supplementary materials); the exception was that the IRF of relatedness was not a significant predictor of expected positive emotions.

Time 2. The direct effect model showed a positive association between the perceived level of materiality-experientiality and the perceived well-being gained and accounted for 22% of the variance of well-being. The mediation model (see Figure 3) indicated that the material-experiential rating variable predicted all IRFs except for projected identity, as in Time 1, and self-esteem. As in Time 1, at Time 2 the IRFs of effectiveness and self-esteem positively predicted well-being. The IRF of projected identity marginally predicted well-being (95% CI did cross zero, suggesting that this effect need to be interpreted with caution. The model with the IRFs as predictors accounted for 41% of the variance of well-being, a significant improvement from the direct effect model (see Table 4). Once again, the results were mirrored when positive emotions were used as the dependent variable (see Table D and Figure C in supplementary materials).

Discussion

The results from Study 2 replicated and extended the key findings from Study 1. Purchases perceived as more experiential also predicted higher levels of satisfaction of the IRFs of distinctiveness, effectiveness, and relatedness at both time frames, and self-esteem at Time 1. These results replicate the findings from Study 1 that suggest that experiential purchases are perceived to satisfy higher levels of IRFs, but with a continuous variable measuring the participants' own perception of the experientiality-materiality of their purchase. Furthermore, as in Study 1, the materiality-experientiality of the purchase was not significantly associated with the satisfaction of the IRF of projected identity, suggesting that consumers use both material and experiential purchases to project a wealthy image and display higher social status. However, this function was only significantly linked to lower well-being at Time 1. The results from Study 2 showed partial mediation by the IRFs of

effectiveness and relatedness at T1 (but not at T2) of the relationship between the perceived material-experiential nature of a purchase and gains in well-being associated with the purchase. Replicating the findings of Study 1, in Study 2 the models with the IRFs as predictors significantly improved the variance explained in well-being suggesting that the satisfaction of the IRFs explain some unique variance in well-being gained in consumption above and beyond the material-experiential nature of a purchase. Moreover, as in Study 1, the models containing the IRFs as predictors were found to explain more variance in the past-temporal focus than in the future ones[8]. Finally, the results from Study 2 also revealed that participants perceived that the satisfaction of the IRFs of self-esteem and relatedness increased after making the purchase suggesting differences in identity-construction processes in consumption between future- and past-focus frames.

General discussion

The present research is the first integrative analysis of identity-related functions of consumer products and its links to expected and experienced well-being gains. Consistent with previous literature on material vs. experiential consumption, the results from two separate studies found that experiential purchases were perceived to provide higher levels of well-being than material ones when consumers evaluated their spending choices before and after purchasing. However, the results also showed that, overall, experiential purchases were found to provide higher satisfaction of the identity motives of distinctiveness, effectiveness, relatedness, and, self-esteem and, that with some exceptions that we will discuss below, the satisfaction of the IRFs was found to be positively associated with well-being in consumption. Nevertheless, in both studies, the IRFs accounted for further unique variance explained in well-being above and beyond the material-experiential nature of the purchase indicating that how a purchase is thought to transform one's sense of self plays an important

[8] This effect is more pronounced in the models with positive emotions as dependent variable.

role at predicting well-being judgements in consumption. Specifically, the IRFs of effectiveness and self-esteem were consistently found to be significant predictors of well-being across samples and time frames. These results indicate that gaining a higher sense of autonomy and control over one's environment, and moving closer to an ideal self are sources of hedonic value for consumers. Overall, these findings confirm in a consumer setting previous research on identity-construction that suggested that the identity motives of efficacy and self-esteem are strongly linked to positive affect (Vignoles et al, 2006).

Nevertheless, the IRFs of distinctiveness and relatedness were found to be significant predictors of well-being in Study 1 but not in Study 2. A possible explanation might come from uniqueness theory that postulates that individuals seek to perceive themselves as having an optimal level of distinctiveness from others (not too highly similar or dissimilar from other people) for obtaining emotional gratification because high or low levels of distinctiveness might in fact arouse negative emotions (Lynn & Snyder, 2002, p. 396). Therefore, the variability found across the studies on the prediction of well-being by the function of distinctiveness could suggest that the relationship between these variables might not be linear and that it is possible that different levels of satisfaction of this identity motive might provide different effects on well-being. Moreover, it is also worth noting that the present research measured symbolic relatedness, or the extent to which a purchase helped the consumer to feel a symbolic affiliation with other people rather than how the purchase helps the buyer to foster social connections as other studies in the literature have done (e.g. Caprariello & Reis, 2013; Howell & Hill, 2009). Furthermore, some authors have claimed that happiness, as well as other positive and negative emotions, are influenced by social discourses and norms because they create expectations about what are 'happiness sources' that affect individual well-being judgements (Ahmed, 2010). As a result, it is possible that the variability found between samples when looking at the links between the satisfaction of the motives of distinctiveness

and relatedness, and well-being in a consumer setting might reflect the fact that these relationships are individually and socially constructed. MICT postulates that even though the identity motives are universal, the strategies that people use for its satisfaction might change among individuals and groups. Therefore, it is possible that the practice of spending money on consumer products for achieving the satisfaction of certain identity motives and how they are perceived to be linked to gains in well-being might differ between consumers and across social groups. Overall, the current research supports the postulates of MICT (Vignoles, 2011) in a consumer environment. However, the discrepancies found across samples in the satisfaction of the IRFs of distinctiveness and relatedness suggests that further research is needed for understanding the links between these functions and the expected or perceived well-being gains in consumption as these relationships might be moderated by differences in the individual and social environment in which the identity evaluations and well-being judgements are made.

Furthermore, it is worth noting that both studies also found that neither material nor experiential purchases are better at the satisfaction of the function of projected identity, suggesting that, contrary to the extensive literature on conspicuous consumption that has focused on material purchases and possessions (e.g. Dittmar, 1992; Richins, 1994, 2013), consumers also use experiential purchases to signal wealth and social status to others. This finding could reflect an evolution of the environments in which individuals use consumer products for self-presentation strategies. Traditionally material possessions have been more accessible to external observers for the formation of an opinion or image of someone based on their noticeable consumption habits, and thus, might have been more often used for self-enhancement purposes in the past as experiential consumption could only be displayed during a conversation. However, with the development of new technologies and the adoption of internet-based social networks, self-presentation strategies are not exclusively carried out in

real life or require physical interaction but have also been extended to other digital environments (Schau & Gilly, 2003). Therefore, it has become increasingly possible for consumers to use their experiential spending choices, such as holidays or music events, to display an image to others by posting and sharing pictures and messages through online platforms regarding their intangible expending habits. Therefore, the present research suggests that studies looking at conspicuous consumption should also incorporate experiential spending behaviours, as a ski holiday in the Swiss Alps or VIP concert tickets might also be used to signal wealth and social status to others. In addition, the current research also found that, overall, the function of projected identity (displaying a wealthy image and higher social status through consumption) is negatively linked to well-being, perhaps because the function of projected identity that primarily aims to construct an image in the eyes of others, as opposed to other identity functions that might help individuals to build their own sense of self, require some external validation to be satisfied. This finding partially supports SDT (Deci & Ryan, 2000), which postulates that pursuing extrinsic goals (such as wealth or appearance) leads to lower well-being.

Finally, the perceived satisfaction of the identity motives of self-esteem and relatedness increased once a purchase was made suggesting that these identity motives might be heightened when consumers create a narrative to make sense of their past spending choices. The IRFs were also found to explain more variance in well-being judgements from past purchases than from future ones across studies, although this difference was more pronounced when predicting positive emotions, suggesting that identity construction processes might be better predictors of retrospective well-being judgements than of expected future hedonic gains. These results suggest that past purchases might be more strongly integrated within the buyer's identity than future ones and indicate possible differences in identity and well-being evaluation processes between past and future spending choices.

Limitations and further research

Several limitations to the studies should be acknowledged. First, the self-reported measures used may be subject to social desirability biases due to the negative stereotypes and stigmatization of material purchases and materialistic buyers (Van Boven et al, 2010), which could influence reported self-perceptions and well-being associations. Furthermore, the current research, in line with previous studies on material and experiential purchases, used explicit measures of well-being associated with a purchase. That is, we are measuring consumers' perceptions or expectations of well-being and positive affect gains from their spending choices, but not actual improvements of well-being due to consumption. Therefore, it is possible that explicit questions regarding well-being expected or perceived from a purchase might be an implicit measure of subjective beliefs about the attainment of well-being through consumption. As a result, further research should explore alternative ways to measure well-being gains in consumption. For example, by using implicit measures of well-being, such as specific outcomes on health, social or relational benefits or self-development obtained from a purchase (e.g. time spent on exercise after buying a gym membership or sports equipment; improvement in social and/or intimate relationships after purchasing a mobile phone or a holiday; the development of skills or learning after the purchase of a computer device or the enrolment on an educational program) might provide a better insight on the effects that spending money on different consumer products might have on the well-being of the buyer than self-reported explicit measures on expected or perceived gains on well-being. Along the same lines, the current set of studies might be limited by the fact that both samples were taken in the UK, which can be considered a consumer-oriented society[9],

[9] Consumer expenditure constitutes 65% of the UK gross domestic product and this figure is in line with other developed countries such as the United States (68.1%), Italy (60.8%), Spain (57.8%), Germany (53.9%) and France (55.3%) (Word Bank, 2017).

and therefore, as some authors have pointed out, its consumer culture heightens the importance of purchasing as a way of achieving positive affective states (Dittmar, 2008).

In addition, these studies compared forecasted well-being (e.g. '*How happy do you think it will make you?*') with well-being experienced in the present moment evoked by a past purchase (e.g. *'When you think about your purchase now, how happy does it make you?'*) mirroring previous temporal conditions used in the experiential vs. material literature (e.g. Caprariello & Reis, 2013; Pchelin & Howell, 2014; Van Boven & Gilovich, 2003). However, the differences between well-being experienced in the present moment from a future purchase or the remembered past evaluations were not investigated. As a result, future research could explore possible differences between forecasted, remembered past, and *present* well-being gains from purchases. Moreover, it is also worth noting the possible limitations of repeated measures designs in consumption research. Previous research has suggested that the expectations for a product in the pre-consumption phase can affect post-consumption evaluations (Patrick, MacInnis & Park, 2007). Therefore, it is possible that by asking participants in Study 2 to consciously reflect on their future purchases and report measures of identity and well-being associated with them, the post-consumption scores might have been altered or adjusted by their initial expectations.

Overall, the present research provides an initial exploration of the links between identity construction process and well-being gains in consumption before and after an experiential or material consumer product is bought. However, further research should also examine the social and relational aspects of identity construction in consumption and its links to well-being and positive affect as well as possible differences between social groups and across different life stages to fully understand the relationship between identity changes and well-being gains associated with spending behaviours.

Open science

The data, R code, and supplementary materials for this article are available on its Open Science Framework page (https://osf.io/7x2u6/).

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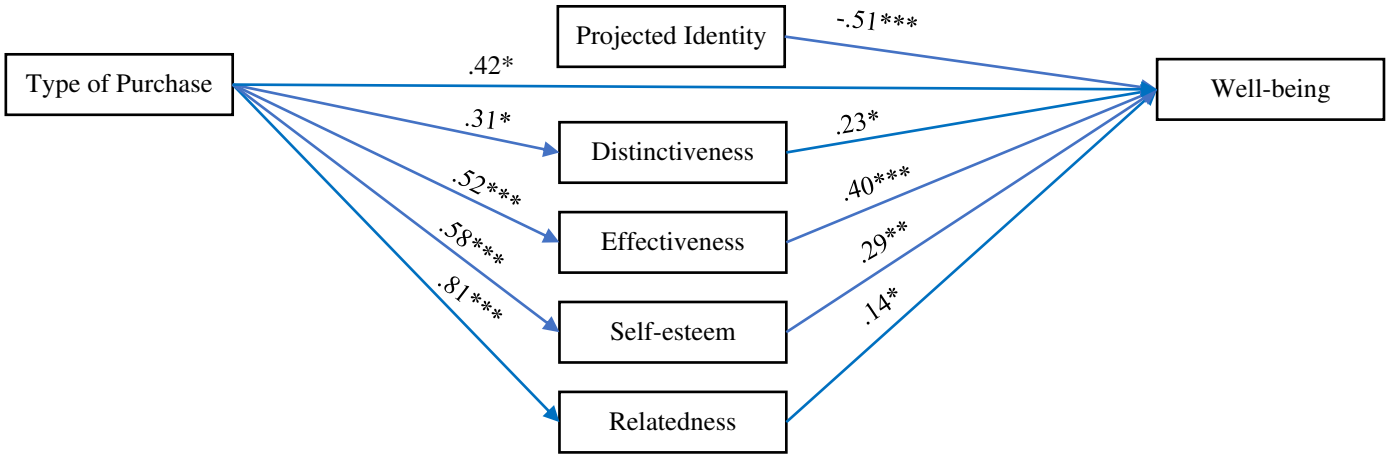
Figure 1: Study 1. Final multi-group SEM model comparing future (n = 165) and past (n = 164) conditions on the mediation of the IRFs of projected identity, distinctiveness, effectiveness, self-esteem, and relatedness on the relationship between the type of purchase (coded as 0 = Material and 1= Experiential) and estimations on well-being gained from the purchase.



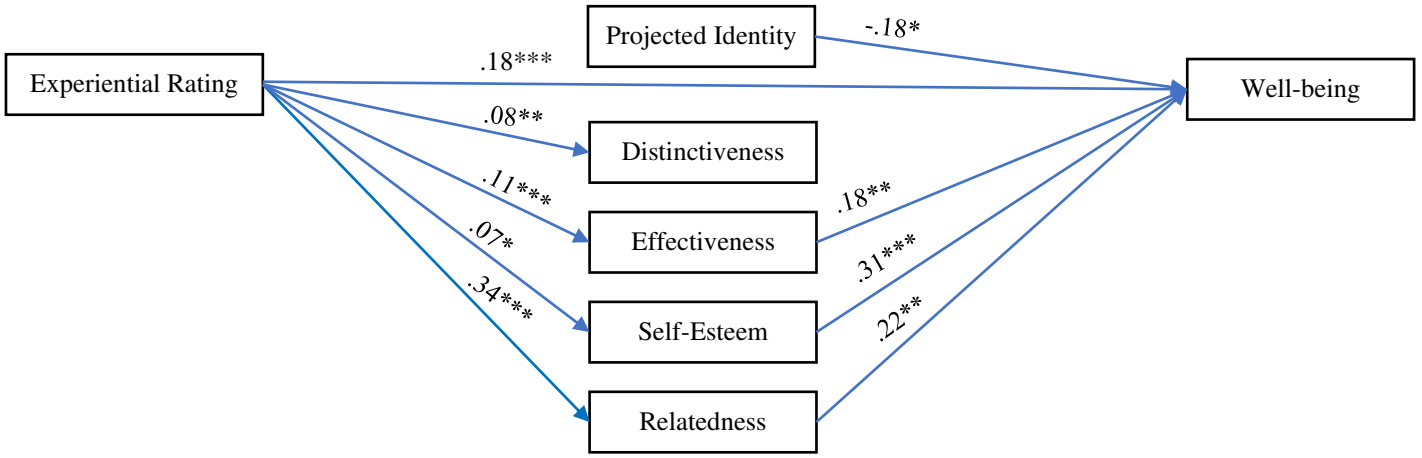
CFI = 1; RMSEA = .000; χ^2 = 7.880; df = 11; p = .724.

R^2 Future = .30; R^2 Past = .37

*p < .05; **p < .01; ***p <.001.

Note: Unstandarized estimates are reported, only significant paths are displayed. Equality constraints have been applied.

Figure 2: Study 2. Final SEM model at Time 1 (n = 370) looking at the mediation of the IRFs of projected identity, distinctiveness, effectiveness, self-esteem, and relatedness on the relationship between the material-experiential rating and the expected gains on well-being from the purchase.

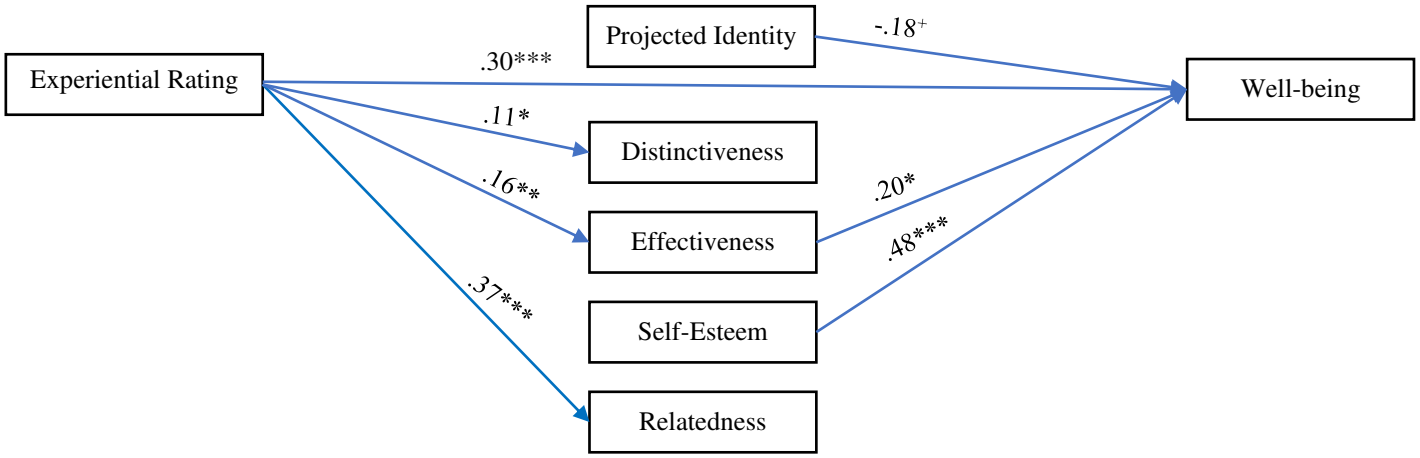


*p < .05; **p < .01; ***p < .001.

R^2 = .39.

Note: Unstandardized estimates reported. Only significant paths are displayed

Figure 3: Study 2. Final SEM model at Time 2 (n = 183) looking at the mediation of the IRFs of projected identity, distinctiveness, effectiveness, self-esteem, and relatedness on the relationship between the material-experiential rating and experienced well-being gained from the purchase.



^{+}p = .08; *p < .05; **p < .01; ***p < .001.

R^2 = .41.

Note: Unstandardized estimates reported. Only significant and marginally significant paths are displayed.

Table 1: Mean, standard deviations and correlations among the variables in the models. Future condition correlations on the bottom (n = 165); Past condition correlations on the top (n = 164).

	Future		Past									
	M	SD	M	SD	1	2	3	4	5	6	7	8
1.Type[1]	0.56	0.50	0.50	0.50	-	.23**	.23**	-.00	.09	.23**	.25**	.22**
2. Well-being	6.47	1.69	6.44	1.89	.25**	-	.60**	-.01	.41**	.35**	.37**	.33**
3. Positive Emotions	2.69	.78	2.37	1.01	.16*	.50**	-	.11	.45**	.42**	.51**	.40**
4. Projected identity	2.41	1.19	2.65	1.16	-.08	-.12	-.07	-	.51**	.42**	.55**	.33**
5. Distinctiveness	3.56	1.17	3.69	1.14	.15	.25**	.38**	.40**	-	.48**	.76**	.49**
6. Effectiveness	3.31	1.15	3.27	1.16	.21**	.46**	.35**	.20*	.36**	-	.63**	.49**
7. Self-esteem	3.51	1.34	3.61	1.31	.16*	.34**	.42**	.50**	.76**	.57**	-	.45**
8. Relatedness	2.88	1.43	3.17	1.49	.29**	.16*	.27**	.38**	.33**	.35**	.47**	-

*Correlation is significant at the 0.05 level (2-tailed). **Correlation is significant at the 0.01 level (2-tailed).

[1] Coded as 0 = Material; 1= Experiential.

Table 2: Study 1. Unstandardized, standardized, significance levels and bootstrapped 95% confidence intervals for models reported in Figure 1 (standard errors in parenthesis; Future n = 165/ Past n = 164)[1].

Parameter estimate	Unstandardized estimates	Standardized estimates[3]	p	Bootstrapped 95% CI	R^2	Model comparison: Constrained vs. unconstrained
Direct effect model						$\chi^2(1) = .225$, $p = .635$
Path *c*: Type of purchase[2] → Well-being	.99 (.19)	.29/.27	<.001	.62, 1.36	.07/.08	
Mediation Model (Figure 1)						$\chi^2(11) = 7.880$, $p = .724$
Path *c'*: Type of purchase → Well-being	.42 (.17)	.12	.015	.08, .75		
Path *a1*: Type of purchase → Projected identity	-.06 (.13)	-.03	.617	-.31, .19	.00	
Path *a2*: Type of purchase → Distinctiveness	.31 (.13)	.13	.014	.06, .56	.02	
Path *a3*: Type of purchase → Effectiveness	.52 (.12)	.23	<.001	.28, .77	.05	
Path *a4*: Type of purchase → Self-esteem	.58 (.01)	.21/.23	<.001	.30, .86	.05	
Path *a5*: Type of purchase → Relatedness	.81 (.14)	.27/.28	<.001	.51, 1.11	.07/.08	
Path *b1*: Projected identity → Well-being	-.51 (.08)	-.35/-.36	<.001	-.67, -.35		
Path *b2*: Distinctiveness → Well-being	.24 (.11)	.15/.16	.028	.03, .55		
Path *b3*: Effectiveness → Well-being	.40 (.09)	.25/.27	.<.001	.23, .57		
Path *b4*: Self-esteem → Well-being	.30 (.11)	.21/.24	.007	.08, .51		
Path *b5*: Relatedness → Well-being	.14 (.05)	.11	.039	.01, .26		
Indirect Effects						
(*a2*b2*) Type of purchase → Distinctiveness → Well-being	.07 (.05)	.02	.101	-.01, .16		
(*a3*b3*) Type of purchase → Effectiveness → Well-being	.21 (.07)	.06	.002	.09, .34		
(*a4*b4*) Type of purchase → Self-esteem → Well-being	.17 (.08)	.05	.025	.02, .32		
(*a5*b5*) Type of purchase → Relatedness → Well-being	.11 (.06)	.01	.055	-.00, .22		
Total Effect						
c' + (*a1*b1*) + (*a2*b2*) + (*a3*b3*) + (*a4*b4*) + (*a5*b5*)	1.01 (.19)	.30	<.001	1.38, 1.01	.30/.37	

[1]The time condition was dummy coded as 0 = Past and 1 = Future.

[2] The type of purchase condition was dummy coded as 0 = Material and 1 = Experiential.

[3] Standardized estimates calculated might differ between past and future groups even if the path was constrained to be equal.

Table 3: Mean, standard deviations and correlations among the variables in study 2 (Time 1 n = 370; Time 2 n = 183).

	M	SD	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1. Experiential rating T1	4.06	2.56	.87**	.43**	.40**	.33**	.36**	-.08	-.08	.14**	.17*	.19**	.21**	.10*	.05	.54**	.52**
2. Experiential rating T2	4.20	2.53	-	.46**	.47**	.31**	.42**	-.06	-.07	.09	.18*	.20**	.25**	.07	.09	.54**	.57**
3. Well-being T1	6.12	1.77		-	.72**	.64**	.65**	.20**	.22**	.39**	.45**	.45**	.49**	.45**	.46**	.51**	.50**
4. Well-being T2	6.05	1.83			-	.52**	.65**	.17*	.16*	.31**	.38**	.39**	.48**	.37**	.45**	.42**	.44**
5. Positive emotions T1	3.47	.81				-	.65**	.13*	.17*	.34**	.38**	.39**	.36**	.36**	.39**	.36**	.40**
6. Positive emotions T2	3.37	.89					-	.18*	.16*	.34**	.48**	.41**	.51**	.35**	.48**	.38**	.47**
7. Projected identity T1	2.94	1.44						-	.74**	.49**	.31**	.43**	.37**	.63**	.54**	.34**	.26**
8. Projected identity T2	2.99	1.44							-	.38**	.48**	.35**	.44**	.54**	.66**	.31**	.40**
9. Distinctiveness T1	3.94	1.42								-	.71**	.53**	.51**	.73**	.60**	.46**	.38**
10. Distinctiveness T2	4.06	1.50									-	.45**	.60**	.58**	.76**	.42**	.55**
11. Effectiveness T1	3.66	1.52										-	.69**	.65**	.56**	.46**	.39**
12. Effectiveness T2	3.69	1.57											-	.56**	.70**	.49**	.55**
13. Self-esteem T1	3.82	1.60												-	.73**	.45**	.39**
14. Self-esteem T2	3.97	1.69													-	.42**	.54**
15. Relatedness T1	3.55	1.58														-	.78**
16. Relatedness T2	3.87	1.65															-

*Correlation is significant at the 0.05 level (2-tailed). **Correlation is significant at the 0.01 level (2-tailed).

Table 4: Study 2. Unstandardized, standardized, significance levels and bootstrapped 95% confidence intervals for models reported in Figures 2 and 3 (standard errors in parenthesis). Time 1 n = 370; Time 2 n = 183.

	Time 1 Model					Time 2 Model				
Parameter estimate	**Unstandardized estimates**	**Standardized estimates**	***p***	**Bootstrapped 95% CI**	**R^2**	**Unstandardized estimates**	**Standardized estimates**	***p***	**Bootstrapped 95% CI**	**R^2**
Direct effect models										
Path *c*: Experiential rating → Well-being	.39 (.03)	.43	<.001	.29, .43	.19	.34 (.05)	.47	<.001	.25, .43	.22
Mediation Models (Figures 2 & 3)										
Path *c'*: Experiential rating → Well-being	.18 (.04)	.26	<.001	.11, .25		.30 (.06)	.41	<.001	.19, .41	
Path *a1*: Experiential rating → Projected identity	-.05 (.03)	-.08	.107	-.10, .01	.01	-.04 (.04)	-.07	.361	-.12, .04	.01
Path *a2*: Experiential rating → Distinctiveness	.08 (.03)	.14	.006	.02, .13	.02	.11 (.04)	.18	.016	.07, .24	.03
Path *a3*: Experiential rating → Effectiveness	.11 (.03)	.19	<.001	.06, .17	.04	.16 (.05)	.25	.001	.07, .24	.06
Path *a4*: Experiential rating → Self-esteem	.07 (.03)	.10	.045	.00, .13	.01	.06 (.05)	.09	.225	-.04, .16	.01
Path *a5*: Experiential rating → Relatedness	.34 (.03)	.55	<.001	.28, .39	.30	.37 (.04)	.57	<.001	.29, .45	.33
Path *b1*: Projected identity → Well-being	-.13 (.07)	-.11	.049	-.14, -.01		-.18 (.10)	-.14	.081	-.38, .02	
Path *b2*: Distinctiveness → Well-being	.04 (.08)	.03	.584	-.11, .19		-.05 (.11)	-.04	.681	-.27, .18	
Path *b3*: Effectiveness → Well-being	.18 (.06)	.16	.004	.06, .31		.20 (.01)	.17	.046	.00, .39	
Path *b4*: Self-esteem → Well-being	.31 (.08)	.28	<.001	.15, .46		.48 (.13)	.44	<.001	.23, .72	
Path *b5*: Relatedness → Well-being	.22 (.07)	.19	.001	.09, .34		-.05 (.10)	-.05	.597	-.26, .15	
Indirect Effects										
(*a3*b3*) Experiential rating → Effectiveness → Well-being	.02 (.01)	.03	.023	.00, .04		.03 (.02)	.04	.083	-.01, .07	
(*a4*b4*) Experiential rating → Self-esteem → Well-being	.02 (.02)	.03	.076	-.00, .04		.03 (.04)	.04	.248	-.02, .08	
(*a5*b5*) Experiential rating → Relatedness → Well-being	.07 (.03)	.10	.001	.03, .12		-.02 (.05)	-.03	.597	-.10, .06	
Total Effects										
c' + (*a1*b1*) + (*a2*b2*) + (*a3*b3*) + (*a4*b4*) + (*a5*b5*)	.30 (.03)	.43	<.001	.23, .36	.39	.34 (.05)	.47	<.001	.25, .34	.41

Table A: Positive emotions items and factor loadings from Study 1 (n = 329) and Study 2 T1 (n = 370) and at T2 (n = 183).

		Cronbach's Alpha (α)					Factor Loadings			
Description	**Reference**	**S1 Future**	**S1 Past**	**S2T1**	**S2T2**	**Items**	**S1 Future**	**S1 Past**	**S2T1**	**S2T2**
The positive emotions variable is a composite measure of thirteen positive emotions evoked by a purchase from the Consumption Emotions Set.	Richins (1997)	.89	.94	.92	.93	Joyful	.73	.71	.83	.83
						Calm	.37	.56	.38	.55
						Peaceful	.43	.64	.57	.64
						Fulfilled	.71	.76	.73	.73
						Optimistic	.68	.77	.79	.82
						Pleased	.75	.75	.77	.72
						Hopeful	.61	.70	.69	.75
						Happy	.77	.87	.79	.84
						Excited	.74	.80	.78	.75
						Enthusiastic	.83	.86	.77	.85
						Encouraged	.70	.82	.70	.77
						Contented	.56	.69	.63	.66
						Thrilled	.69	.82	.72	.74

Table B: Identity related functions description, items* and factor loadings from Study 1 (n = 329) and Study 2 T1 (n = 370) and at T2 (n = 183).

Identity-related functions	Description	Reference	Cronbach's Alpha (α)				Items	Factor Loadings			
			S1 Future	S1 Past	S2T1	S2T2		S1 Future	S1 Past	S2T1	S2T2
Projected Identity	Social status and reputation. Identity projection. Conspicuous consumption.	Dittmar et al. (2008), Dittmar & Kapur (2011)	.86	.74	.84	.85	I (will buy) bought this purchase thinking about how others will see me	.83	.75	.82	.85
							This purchase (will give) gave me prestige	.81	.76	.86	.81
							I (will buy) bought this purchase to impress other people	.81	.78	.81	.84
							Buying this purchase gave me great social status	.89	.71	.84	.84
Effectiveness	Control, independence, autonomy.	Dittmar (2011)	.74	.72	.84	.85	This purchase (will make) made me feel more independent	.75	.65	.83	.87
							This purchase (will help) helped me to gain autonomy	.80	.75	.84	.86
							This purchase (will help) helped me to gain control over my environment	.67	.73	.77	.74
							Buying this (will give me) gave me a sense of personal control	.78	.82	.84	.85
Distinctiveness/ Actual identity	Individuality/differentiation, symbol of personal qualities, values, goals.	Dittmar (2011)	.77	.77	.81	.84	The purchase (will help) helped me to express what is unique about me	.76	.71	.84	.88
							This purchase fits with who I am	.81	.81	.73	.77
							The purchase (will make) made me feel different from others	.65	.69	.75	.74
							This purchase (will express) expresses who I am	.84	.85	.87	.88
Self-Esteem/ Ideal identity	Identity repair, moving closer to an ideal self.	Dittmar (2011)	.86	.86	.89	.91	This purchase (will help) helped me to boost my self-esteem	.73	.79	.85	.86
							This purchase (will make) made me feel closer to my ideal self	.89	.86	.87	.90
							This purchase (will make) made me feel more like the person I want to be	.89	.88	.89	.90
							Buying this (will give) gave me a greater sense of self-worth	.84	.81	.84	.90
Relatedness	Symbolic interrelatedness and social identity function. Affiliation with close others and group membership.	Dittmar (2011)	.84	.85	.77	.82	This purchase (will symbolise) symbolised close personal relationships	.82	.85	.80	.83
							Buying this (will make) made me think of people who I feel very close to	.83	.79	.74	.79
							This purchase (will express) expressed which group or groups of people I belong to	.81	.86	.80	.83
							This purchase (will help) helped me to feel more of a part of a social group	.82	.82	.73	.78

*In brackets are the future condition items.

Table C: Study 1. Unstandardized, standardized, significance levels and bootstrapped 95% confidence intervals for models reported in Figure A (standard errors in parenthesis; Future n = 165/ Past n = 164)[1].

Parameter estimate	Unstandardized estimates	Standardized estimates[3]	p	Bootstrapped 95% CI	R^2	Model comparison: Constrained vs. unconstrained
Direct effect model						$\chi^2(1) = 1.192$, $p = .275$
Path *c*: Type of purchase[2] → Positive Emotions	.33 (.10)	.21/.16	<.001	.14, .51	.04/.03	
Mediation Model (Figure 1)						$\chi^2(11) = 13.890$, $p = .239$
Path *c'*: Type of purchase → Positive emotions	.02 (.09)	.01	.850	-.15, .18		
Path *a1*: Type of purchase → Projected identity	-.06 (.13)	-.03	.617	-.06, .19	.00	
Path *a2*: Type of purchase → Distinctiveness	.31 (.13)	.13	.014	.06, .56	.02	
Path *a3*: Type of purchase → Effectiveness	.52 (.12)	.23	<.001	.28, .77	.05	
Path *a4*: Type of purchase → Self-esteem	.58 (.01)	.21/.23	<.001	.30, .86	.05	
Path *a5*: Type of purchase → Relatedness	.81 (.14)	.28/.28	<.001	.51, 1.11	.07/.08	
Path *b1*: Projected identity → Positive emotions	-.24 (.04)	-.35/-.29	<.001	-.32, -.16		
Path *b2*: Distinctiveness → Positive emotions	.14 (.05)	.20/.17	.008	.04, .25		
Path *b3*: Effectiveness → Positive emotions	.10 (.04)	.14/.12	.027	.01, .18		
Path *b4*: Self-esteem → Positive emotions	.22 (.05)	.37/.30	<.001	.11, .33		
Path *b5*: Relatedness → Positive emotions	.10 (.03)	.17/.16	.003	.03, .16		
Indirect Effects						
(*a2*b2*) Type of purchase → Distinctiveness → Positive emotions	.04 (.02)	.03	.070	-.00, .09		
(*a3*b3*) Type of purchase → Effectiveness → Positive emotions	.05 (.03)	.03	.050	.00, .09		
(*a4*b4*) Type of purchase → Self-esteem → Positive emotions	.13 (.05)	.08	.004	.04, .22		
(*a5*b5*) Type of purchase → Relatedness → Positive emotions	.08 (.03)	.05	.009	.02, .14		
Total Effect						
c' + (*a1*b1*) + (*a2*b2*) + (*a3*b3*) + (*a4*b4*) + (*a5*b5*)	.33 (.10)	.20	<.001	.15, .52	.27/.38	

[1]The time condition was dummy coded as 0 = Past and 1 = Future.

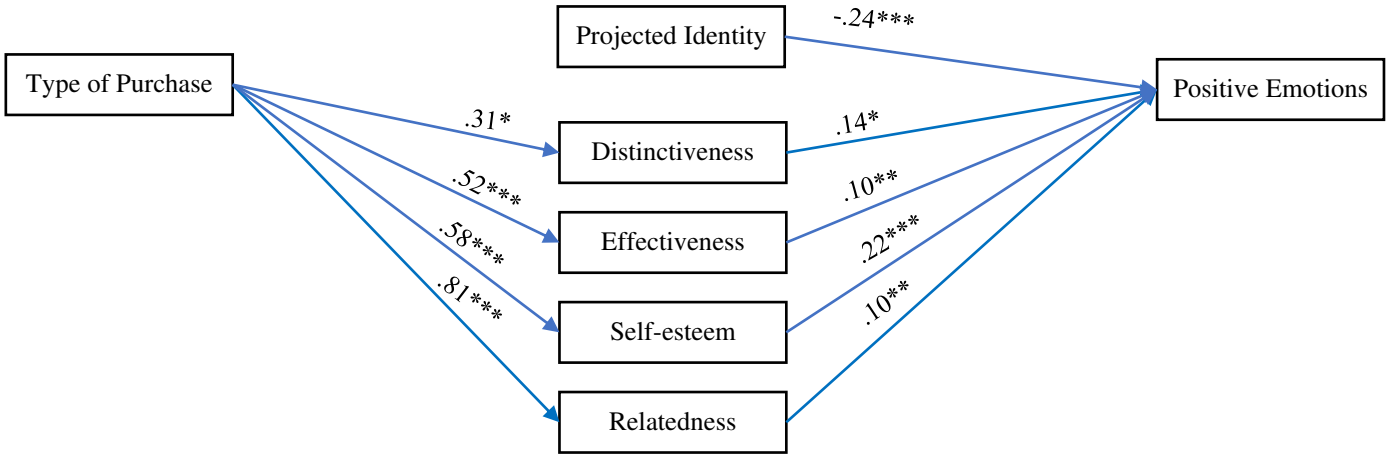
[2] The type of purchase condition was dummy coded as 0 = Material and 1 = Experiential.

[3] Standardized estimates calculated might differ between past and future groups even if the path was constrained to be equal.

Table D: Study 2. Unstandardized, standardized, significance levels and bootstrapped 95% confidence intervals for models reported in Figures B and C (standard errors in parenthesis). Time 1 n = 370; Time 2 n = 183.

	Time 1 Model					Time 2 Model				
Parameter estimate	**Unstandardized estimates**	**Standardized estimates**	***p***	**Bootstrapped 95% CI**	**R^2**	**Unstandardized estimates**	**Standardized estimates**	***p***	**Bootstrapped 95% CI**	**R^2**
Direct effect models										
Path *c*: Experiential rating → Positive Emotions	.10 (.02)	.33	<.001	.07, .13	.11	.15 (.02)	.42	<.001	.10, .20	.18
Mediation Models (Figures 2 & 3)										
Path *c'*: Experiential rating → Positive emotions	.07 (.02)	.21	<.001	.03, .10		.11 (.03)	.30	<.001	.05, .16	
Path *a1*: Experiential rating → Projected identity	-.05 (.03)	-.08	.107	-.10, .01	.01	-.04 (.04)	-.07	.361	-.12, .04	.01
Path *a2*: Experiential rating → Distinctiveness	.08 (.03)	.14	.006	.02, .13	.02	.11 (.04)	.18	.016	.02, .19	.03
Path *a3*: Experiential rating → Effectiveness	.11 (.03)	.19	<.001	.06, .17	.04	.16 (.05)	.25	.001	.07, .24	.06
Path *a4*: Experiential rating → Self-esteem	.07 (.03)	.10	.045	.00, .12	.01	.06 (.05)	.09	.225	-.04, .16	.01
Path *a5*: Experiential rating → Relatedness	.36 (.03)	.55	<.001	.28, .39	.30	.37 (.04)	.57	<.001	.29, .45	.33
Path *b1*: Projected identity → Positive emotions	-.08 (.03)	-.13	.027	-.14, -.01		-.12 (.05)	-.20	.014	-.22 -.02	
Path *b2*: Distinctiveness → Positive emotions	.06 (.04)	.10	.133	-.02, .13		.10 (.05)	.17	.069	-.01, .21	
Path *b3*: Effectiveness → Positive emotions	.11 (.03)	.20	.001	.02, .17		.12 (.05)	.21	.011	.03, .22	
Path *b4*: Self-esteem → Positive emotions	.10 (.04)	.19	.017	.02, .17		.16 (.06)	.30	.009	.04, .28	
Path *b5*: Relatedness → Positive emotions	.03 (.03)	.06	.324	-.03, .10		-.00 (.05)	-.01	.960	-.10, .09	
Indirect Effects										
(*a3*b3*) Experiential rating → Effectiveness → Positive emotions	.01 (.01)	.04	.014	.00, .02		.02 (.01)	.05	.040	.00, .04	
Total Effects										
c' + (*a1*b1*) + (*a2*b2*) + (*a3*b3*) + (*a4*b4*) + (*a5*b5*)	.10 (.02)	.33	<.001	.13, .10	.25	.15 (.02)	.42	<.001	.10, .20	.42

Figure A: Study 1. Final multi-group SEM model comparing future (n = 165) and past (n = 164) conditions on the mediation of the IRFs of projected identity, distinctiveness, effectiveness, self-esteem, and relatedness on the relationship between the type of purchase (coded as 0 = Material and 1= Experiential) and positive emotions evoke by the purchase.



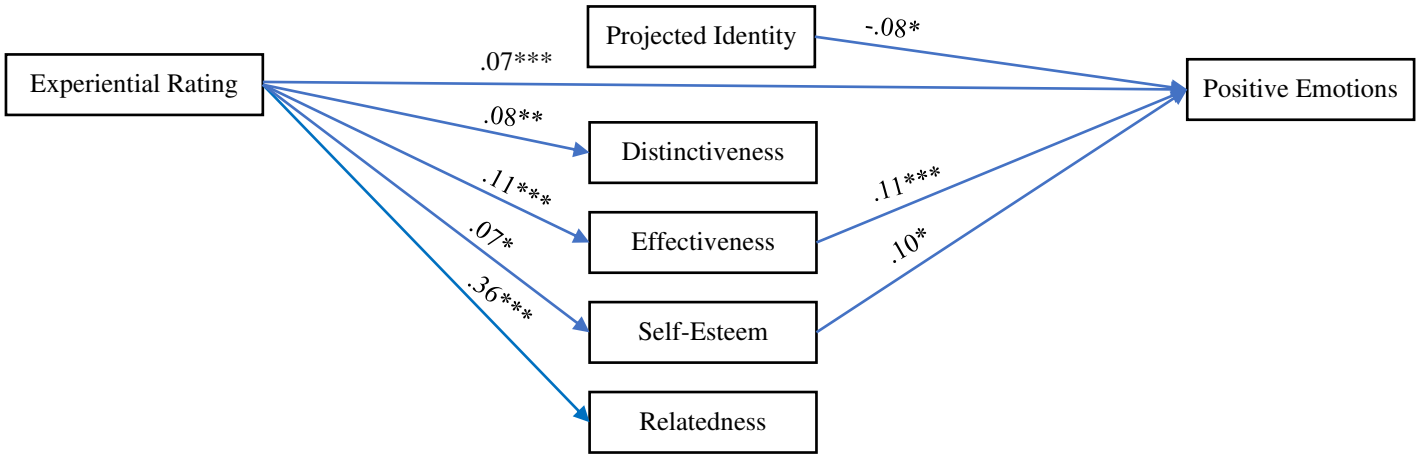
CFI = .996; RMSEA = .040; χ^2 = 13.890; df = 11; p = .239.

*p < .05; **p < .01; ***p <.001.

R^2 Future = .27; R^2 Past = .38

Note: Unstandarized estimates are reported, only significant paths are displayed. Equality constraints have been applied.

Figure B: Study 2. Final SEM model at Time 1 (n = 370) looking at the mediation of the IRFs of projected identity, distinctiveness, effectiveness, self-esteem, and relatedness on the relationship between the material-experiential rating and the expected positive emotions evoke by the purchase.

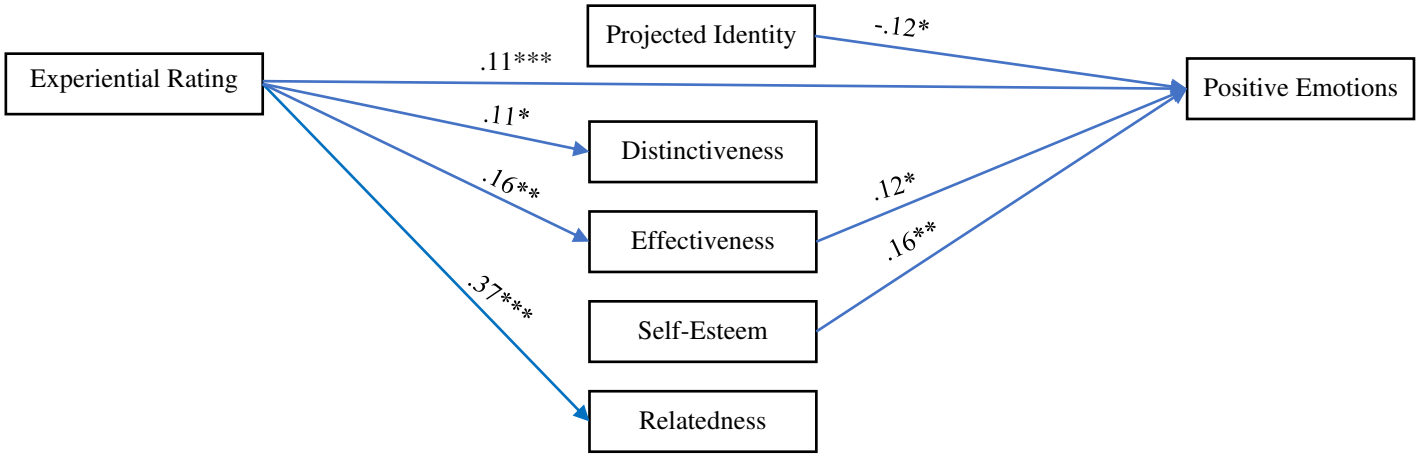


*p < .05; **p < .01; ***p < .001.

R^2 = .25

Note: Unstandardized estimates reported. Only significant paths are displayed

Figure C: Study 2. Final SEM model at Time 2 (n = 183) looking at the mediation of the IRFs of projected identity, distinctiveness, effectiveness, self-esteem, and relatedness on the relationship between the material-experiential rating and the experienced positive emotions evoke by the purchase.



*p < .05; **p < .01; ***p < .001.

R^2 = .42

Note: Unstandardized estimates reported. Only significant paths are displayed.